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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Bent S. Jensen

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EXAMINER

NEURAUTER, GEORGE C

ART UNIT

PAPER NUMBER

2143

MAIL DATE

DELIVERY MODE

10/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/823,127	Applicant(s) JENSEN, BENT S.	
	Examiner George C. Neurauter, Jr.	Art Unit 2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-28 are currently presented and have been examined.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 September 2007 has been entered.

Response to Arguments

Applicant's arguments filed 17 September 2007 have been fully considered but they are not persuasive.

The Applicant argues White does not teach wherein a first frame fragmentation indicator is within a trailer of a subframe. The Examiner agrees with the Applicant's statement that "It is the header that contains a field indicating that the first subframe 140 is the initial subframe in the sequence (White, paragraph [0045]), not the trailer." (see page 7 of 13 of the Applicant's response) However, the Examiner explained why including the first frame fragmentation indicator within a

trailer would have been obvious in the previous Office Action.
Such explanation is expounded upon below.

The Applicant has amended the claims to recite wherein the first frame fragmentation information is appended to the end of the first data segment to "promote transmission of a high priority frame over the low priority frame". However, any such arguments regarding this limitation are moot since the limitation merely conveys the intended use of the first frame fragmentation information. Claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure. See MPEP 2111.04. Therefore, since the limitation fails to describe any functionality that would distinguish the prior art from the claimed invention in the manner as merely described, the limitation has not been given patentable weight.

The Applicant further argues that the Examiner has failed to make a *prima facie* case of obviousness that the combined teachings of White and Isfeld fail to teach or suggest the claimed invention, particularly that White does not disclose or suggest appending the frame indicator at the end of the subframe as a trailer. The Applicant admits that "White is well aware of the trailer, but even White did not see that appending to end of

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the first data segment would be more efficient." However, the Applicant fails to explain on the record why including this information at the end of a subframe is more efficient.

Further, The Applicant cites the *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727 (2007) Supreme Court decision for support that the Examiner did not make a prima facie case for obviousness. However, the above decision also stated:

"Common sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle...When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense." See *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727 (2007).

In support of the Examiner's previous statements, White clearly discloses that data may be attached to a header and a trailer. Absent any functionality that is recited in the claim wherein the claimed invention differs in function which allows

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the first frame fragmentation data to be used in a way other than convention parsing of a subframe in order to retrieve information in order for the information included in a subframe to be used in a nonconventional way, it would have obvious to merely include information within a header or a trailer would have been within the level of knowledge of one of ordinary skill and would have found it to be common sense to add information to a trailer in a similar manner as information is added to a header, one of ordinary skill would have been taught at least by White and at most by his or her knowledge regarding placing information at the beginning or end of a frame for the purposes of including defining information regarding the frame and its payload, that placing information within a trailer as opposed to a header would have been successful. Therefore, it would have been obvious to place information within a trailer in the same manner as it is placed within the trailer. Again, it is noted that the Applicant failed to explain why the placement of information within a trailer as opposed to a header is paramount to the patentability of the claimed invention. Therefore, the Examiner is not persuaded by the Applicant's remarks.

The Applicant also argues that White and Isfeld do not teach an extension header. Again, the use of extension headers to accommodate future uses of including description information

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regarding the subframe and its payload are well within the knowledge of one of ordinary skill and would have expected the inclusion of extension headers within the frame to be successful as such use is conventional as has been explained previously by the Examiner.

Therefore, the rejections are maintained and the claims are not in condition for allowance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Pub. US 2002/0150100 A1 to White in view of US Patent 5,828,835 to Isfeld.

Regarding Claims 1-3, 9, 10, 16, 21-23, White discloses a network system, method and apparatus for adaptive frame fragmentation, (Abstract; Figs. 1-13; paragraphs -#0013-0015: & Claims 1-37) comprising:

- a sending unit to transmit a first frame fragment, the first frame fragment including a first (payload - entire frame per pending Claim 10) data segment, extracted from a low priority frame and a first frame fragmentation control information appended to the end of the first data segment to promote transmission of a high priority frame over the low priority frame, the first frame fragmentation control information includes at least (i) a first frame fragmentation indicator to specify whether a frame fragment is a first fragment generated from the frame, (ii) a frame fragment sequence number to specify a sequential order number assigned to the first frame fragment generated from the low priority frame, and (iii) a channel number, (paragraphs - #0030-0038; 0042-0052; & Claims 1-37), (Examiner notes that White clearly teaches appending a first identifying field to a first subframe, wherein said identifying field indicates the relative position of said

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first subframe within a fragmented frame, which obviously reads upon Applicant's appended "fragmentation control information" encompassing "a first frame fragmentation indicator to specify whether a frame fragment is a first fragment generated from the frame", or "a frame fragment sequence number to specify a sequential order number assigned to the first frame fragment generated from the low priority frame". Specifically, Examiner finds that one of ordinary skill in the art at the time of invention by Applicant would have obviously considered a first frame fragmentation indicator or a frame fragment sequence number to be "indicative of the relative position of a subframe within a fragmented frame" for purposes of adaptively identifying and fragmenting frames of lower priority into smaller subframes in order to minimize the time spent by frames of higher priority queuing for transmission over the link - paragraph #0033); and the sending unit to transmit a second frame fragment after transmitting the first frame fragment, the second frame fragment including a high priority frame and a second frame fragmentation control information appended to the end of the high priority frame, (per pending Claims 2 & 22), (paragraphs #0030-0038; 0042-0052; & Claims 1-37); and the sending unit to transmit a third frame fragment after transmitting the second frame fragment, the third frame fragment

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including a second (payload) data segment extracted from the low priority frame and a third frame fragmentation control information appended to the end of the second data segment, (per pending Claims 3 & 23), (paragraphs - #0030-0038; 00420052; & Claims 1-37); and

a receiving unit to receive the first, second and third frame fragments transmitted by the sending unit, (paragraphs - #0030-0038 & 0042-0052).

Though White clearly teaches frame fragmentation and the appending of a first identifying field, (frame fragmentation control information) to a first subframe, (White Claims 1-37), White does not specifically enumerate the inclusion of a channel number within that first frame fragmentation control information. Isfeld Clearly teaches priority based message fragmentation routing process wherein the message fragments clearly include a first frame fragmentation indicator, a last frame fragment indicator, a frame fragment sequence number, a channel number and the appending of data, (Isfeld Figs. 13-17; Col. 27, lines 62-67; Col. 28; & Col. 29, lines 1-35), wherein it would have been obvious to one of ordinary skill in the art at the time of invention by Applicant to include the channel information in the first frame fragmentation control information appended to the end of the first data segment.

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The motivation to incorporate the Isfeld message/channel information fragment into the White priority-based message fragmentation method is found within White which enumerates a need for a technique which would minimize the latency and jitter exhibited by frame-based communication systems by adaptively identifying and fragmenting frames of lower priority into smaller subframes in order to minimize the time spent by frames of higher priority queuing for transmission over the link, (White paragraphs # 0012 & #0033), wherein knowledge of the channel number is obviously necessary to the proper transmission and receipt of said frame data. Moreover, Examiner notes that the inclusion of channel information in the data packet was well known in the art at the time of invention by Applicant, thus in light White's teaching of appending data, inclusion of channel information within said data would have been obvious and as such, is found to be unpatentable. Thus Claims 1-3, 9, 10, 16, 21-23 are found to be unpatentable over the combined teachings of White and Isfeld.

Regarding Claims 4-8, 12-15, 17-20 & 24-28, the combined teachings of White and Isfeld are relied upon as noted herein. As noted above, White discloses a network system, method and apparatus for adaptive frame fragmentation incorporating a frame relay protocol, (paragraph #0043), comprising frames and frame

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fragments, (paragraphs #0043-0044), a first frame fragmentation indicator within the first frame fragmentation control information, (per pending Claims 4, 12, 17 & 24), a last frame fragment indicator, (per pending Claims 7, 15, 17 & 27), a frame fragment sequence number within the first frame fragmentation control information, (per pending Claims 5, 13, 18 & 25), (paragraphs #0045-0046, 0054 & 0055).

Though White clearly teaches frame fragmentation, White does not specifically enumerate the inclusion of a channel number within the first frame fragmentation control information, (per pending Claims 6, 14, 19 & 26), and an extension indicator, (per pending Claims 8, 15, 20 & 28). Isfeld Clearly teaches priority-based message fragmentation routing process wherein the message fragments clearly include a first frame fragmentation indicator, (per pending Claims 4, 12, 17 & 24), a last frame fragment indicator, (per pending Claims 7, 15, 17 & 27), a frame fragment sequence number, (per pending Claims 5, 13, 18 & 25) and a channel number, (per pending Claims 6, 14, 19 & 26), (Isfeld - Figs. 13-17; Col. 27, lines 62-67; Col. 28; & Col. 29, lines 1-35). Again, as noted herein, Examiner finds that it would have been obvious to one of ordinary skill in the art at the time of invention by Applicant to include the channel information in the first frame fragmentation control information

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appended to the end of the first data segment. 8. Additionally, Examiner notes that regarding an extension indicator, (per pending Claims 8, 15, 20 & 28), White enumerates the reservation of the seven least significant bits of the first octet to ensure all fragment headers are distinguished from and other framing headers and/or flags which may be introduced during processing, (White paragraph #0047), as well as an FCS frame for purposes of CRC error detection, (White - paragraph #0043), and Isfeld enumerates a 4-bit field for software specific command list entries, (Isfeld - Fig. 15 & Col. 25, lines 31-39), wherein either portion of the frame could obviously be used to extend, add or indicate the extension or addition of fields to the frame fragment control information. Thus Claims 4-8, 12-15, 17-20 & 24-28 are found to be unpatentable over the combined teachings of White and Isfeld.

Regarding Claim 11, the combined teachings of White and Isfeld are relied upon as noted herein. As noted above, White discloses a network system, method and apparatus for adaptive frame fragmentation incorporating a frame relay protocol, (paragraph #0043), comprising frames and frame fragments, (paragraphs #0043-0044), and payload data, (paragraph - #043), wherein it would have been obvious for said payload data to include a data segment extracted from a frame, as said frame may

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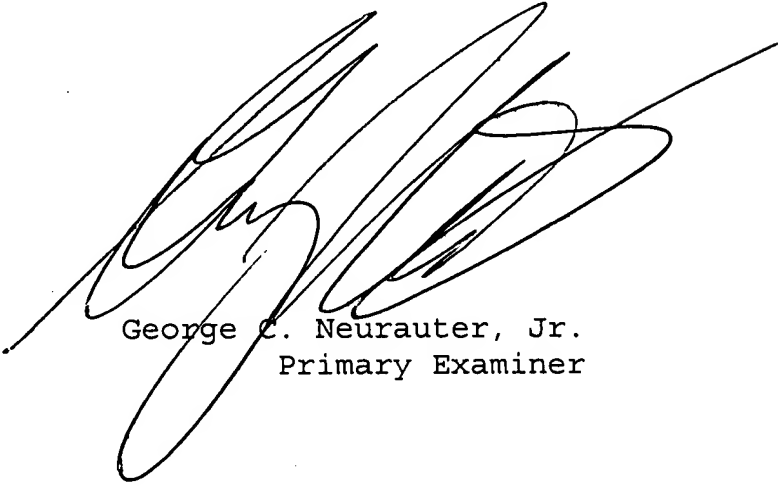
be any number of bytes in length, and wherein within a frame fragmentation apparatus and method, it would have been obvious to divide up large portions of data into smaller portions for faster and more reliable relay of the same. Thus Claim 11 is found to be unpatentable over the combined teachings of White and Isfeld.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Neurauter, Jr. whose telephone number is 571-272-3918.. The examiner can normally be reached on Monday-Friday 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



George C. Neurauter, Jr.
Primary Examiner